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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,298	07/02/2003	Byron E. Anderson	45240-105719	5133
23644 7590 11/19/2007 BARNES & THORNBURG LLP P.O. BOX 2786 CHICAGO, IL 60690-2786			EXAMINER GROSS, CHRISTOPHER M	
			ART UNIT 1639	PAPER NUMBER
			NOTIFICATION DATE 11/19/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent-ch@btlaw.com

Office Action Summary	Application No. 10/612,298	Applicant(s) ANDERSON, BYRON E.	
	Examiner Christopher M. Gross	Art Unit 1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,44,46 and 47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,44,46,47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Responsive to communications entered 10/29/2007. Claims 5,44,46,47 are pending. Claims 5,44,46,47 are examined herein.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/29/2007 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Withdrawn Rejection(s)

The rejection of claims 5-9 under 35 U.S.C. 102(b) as being anticipated by Dooley et al (1994 Science 266:2019-2022) is hereby withdrawn in view of Applicant's amendments to the claims.

The rejection of claims 5-8 under 35 U.S.C. 102(b) as being anticipated by Pinilla et al (1998 J. Mol Biol 283:1013-1025 – IDS entry 4/11/2006) is hereby withdrawn in view of Applicant's amendments to the claims.

The rejection of claims 5-9, 43-44 under 35 U.S.C. 103(a) as being unpatentable over either of **Dooley et al** (1994 Science 266:2019-2022) or **Pinilla et al** (1998 J. Mol. Biol. 283:1013-1025 – IDS entry 4/11/2006) in view of either of **Lam et al** (1991 Nature 354:82-84) or **Lebl et al** (1995 Biopolymers 37: 177-198 – IDS entry 4/11/2006) is hereby withdrawn in view of Applicant's amendments to the claims.

The rejection of claims 5-9 and 45 under 35 U.S.C. 103(a) as being unpatentable over **Dooley et al** (1994 Science 266:2019-2022) in view of **Satoh**

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et al (1998 Analytical Biochemistry 260:96-102) is hereby withdrawn in view of Applicant's amendments to the claims.

The rejection of claims 5-9, 43 and 45 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement (new matter) is hereby withdrawn in view of Applicant's amendments to the claims.

New Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5,44,46 are rejected under 35 U.S.C. 102(b) as being anticipated by Momany (EP 00180072).

The claimed subject matter per claim 5 is drawn to a combinatorial library comprising:

a plurality of D-peptides linked to a support wherein the length of each D-peptide is from three to seven D-amino acid residues, and

wherein at least 40% of the D-peptides comprise at least three aromatic amino acid residues, the remaining amino acids are selected from the group consisting of glycine and D-alanine, and

wherein the D-peptides are suitably constructed or modified to enhance solubility.

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Claims 44 and 46 represent variations thereof.

Momany teaches, throughout the document and especially formula III on pp 3-5 a family of peptides with the formula X-Y3-Z3-E3-G3-J3-Q in which three aromatic D-residues D-Tyr, D-Trp and D-Phe are at positions Y3, Z3 and E3. Said family comprises 50% peptides bearing three aromatic D-amino acids. X is the amino terminus and Q is carboxy terminus.

Commensurate with p 9-10 of the present specification which defines 'suitably constructed to enhance solubility' as "where it is envisioned that one to four D-lysine residues at the C terminus would enhance solubility... [however] any amino acid residue tending to promote solubility [can] be included at the C terminus...[and further] one or more of the D-peptides may be conjugated to another peptide" In this vein, said peptide family according to Momany are suitably constructed to enhance solubility in bearing a Lysine or Arginine residue in position G3, because, absent evidence to the contrary, both L and D stereoisomers are capable or equally enhancing solubility. Momany teaches Gly at position J3, reading on the remaining amino acids are selected from the group consisting of glycine and D-alanine.

Momany teaches preparation of peptides on biobeads and other resins on p 14, lines 16-23, reading on claim 44.

As mentioned above, Momany teaches incorporation of D-Trp, D-Phe and D-Tyr in positions Y3, Z3, E3, reading on claim 46.

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New Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5,44,46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Momany** (EP 00180072) in view of **Barany et al** (US Patent 5235028)

Momany is relied on as above.

Momany et al do not teach a polyethylene glycol link to the support, such as set forth in claim 47.

Barany et al teach, throughout the document and especially figure 1A, a resin for solid-phase peptide synthesis comprising PEG-modified polystyrene (PEG-PS).

It would have been *prima facie* obvious for one of ordinary skill in the art, at the time the claimed invention was made to prepare the peptides of **Momany** using the PEG-PS of **Barany et al**.

One of ordinary skill in the art would have been motivated to make the peptides of **Momany** using the PEG-PS of **Barany et al** because PEG-PS provides better quality peptides, as indicated by **Barany et al** in example 10.

One of ordinary skill in the art would have had a reasonable expectation of success in applying the PEG-PS of **Barany et al** toward the synthesis of the

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peptides according to Momany because both are concerned with preparing peptides (i.e. the peptides of Momany lie well with the scope of the disclosure of Barany et al, see figures 2-4)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Gross whose telephone number is (571)272-4446. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Douglas Schultz can be reached on 571 272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher M Gross
Examiner
Art Unit 1639

cg

/Jon D. Epperson/
Primary Examiner, AU 1639